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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/673,486	09/30/2003	Mustafa K. Guven	08350.2689	1530

7590 03/31/2005  
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EXAMINER

BROADHEAD, BRIAN J

ART UNIT PAPER NUMBER

3661

DATE MAILED: 03/31/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/673,486

Applicant(s)

GUVEN ET AL.

Examiner

Brian J. Broadhead

Art Unit

3661

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 23 December 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-13 and 16-18 is/are rejected.
- 7) ☒ Claim(s) 14 and 15 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 12-23-04.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

**DETAILED ACTION**

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 4, 5, 8, 10, 12, and 16 are rejected under 35 U.S.C. 102(b) as being anticipated by Prabhu et al., 6314727.

3. As per claims 1, 10, 12, and 16, Prabhu et al. disclose a power source(104) operable to generate a power output, the power source having a desired operating range on lines 40-65, on column 5; a transmission including a drive member operably connected with the power source and a driven member(106A); and a control system in communication with the power source and the transmission, wherein the control system is operable to receive at least one input indicative of a load on the transmission, to identify a desired load of the transmission based on the at least one input, to receive at least one input indicative of a current power output of the power source, and to limit desired transmission load applied to the driven member of the transmission based on the current power output of the power source to thereby prevent the power source from operating outside of the desired operating range on lines 27-48, on column 6, and lines 1-5, on column 7.

4. As per claims 4 and 5, Prabhu et al. disclose a variable displacement pump in communication with the control system(108); a variable displacement motor fluidly

connected to the variable displacement pump(106), the variable displacement motor being in communication with the control system, and a sensor operably disposed between the variable displacement pump and the variable displacement motor, the sensor operable to detect a fluid pressure and to provide an indication of the fluid pressure to the control system on lines 25-46, on column 3.

5. As per claim 8, Prabhu et al. disclose an observer in communication with the power source and operable to determine a current output torque estimate of the power source on lines 27-47, on column 6; and a controller in communication with the transmission and operable to determine the desired load of the transmission and to limit the desired load placed on the driven member of the transmission to prevent the power source from operating outside of the desired operating range on line 55, on column 6, through line 7, on column 5.

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 2, 3, 11, and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Prabhu et al., 6314727.

8. Prabhu et al., disclose the limitations as set forth above and inputs indicative of power source performance include speed and quantity of fuel on lines 31-33, on column

6. Prabhu et al. do not disclose the power source is a diesel engine; or the signal

indicative of current power includes a fuel injection timing signal. Prabhu et al. does disclose the machine is an earth moving machine. It is well known in the art that most earth moving machines are diesel powered. Official notice is taken that it is well known in the art to use injection timing as an indication of power source performance. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use a diesel engine in the invention of Prabhu et al. because that is the type of power source readily available and suited to use in earth moving machines and to measure injection timing since that is a indication of the power source operating point.

9. Claims 6, 7, 9, 13, and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Prabhu et al., 6314727, in view of Kuras, 6424902.

10. Prabhu et al. disclose the limitations as set forth above. Prabhu et al. do not disclose a generator in communication with the control system; a motor in communication with the control system and with the generator; a sensor to detect transmission output speed; and sensing motor displacement. Kuras teaches of a generator in communication with the control system; and a motor in communication with the control system and with the generator on lines 25-30, on column 5; a sensor to detect transmission output speed on lines 49-65, on column 4; and sensing displacement on lines 1-10, on column 3. The motor and generator are inherent in the teaching of using an electronic transmission with a motor-generator pair. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the teachings of Kuras in the invention of Prabhu et al. because such modification would allow the invention of Prabhu et al. to work on a variety of common drivetrains; and in

the case of the displacement, to provide an indication of the operation of a transmission necessary for control. It is conventional in the art to interchange different transmission types depending on the situation.

***Allowable Subject Matter***

11. Claims 14 and 15 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

12. The following is a statement of reasons for the indication of allowable subject matter: The prior art of record does not disclose determining a limiting motor command signal by comparing the current power source output power estimate with the current transmission output speed and a maximum acceptable speed droop or overspeed scaling factor.

***Response to Arguments***

13. Applicant's arguments with respect to claims 1-13, 16-18 have been considered but are moot in view of the new ground(s) of rejection. Prabhu et al. has been cited for using an indication of current power source operation in restricting desired transmission load. Prabhu et al. determines a desired load and then based on this load determines whether the power source can and should provide increased output. If the power source has been operating at too high a level over a current period the increase in power is prohibited and the output or load of the transmission, along with the other hydraulic systems, are restricted based on the lower output keeping the engine within its desired operating range.

**Conclusion**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian J. Broadhead whose telephone number is 703-308-9033. The examiner can normally be reached on Monday through Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Black can be reached on 703-305-8233. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
BJB

  
THOMAS BLACK  
SUPERVISORY PATENT EXAMINER  
GROUP 2002